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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,537	03/29/2001	Yuji Karakawa	1115.65380	4187

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EXAMINER

PATEL, GAUTAM

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/820,537

Applicant(s)

KARAKAWA ET AL.

Examiner

Gautam R. Patel

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 9-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

#10

Response to Amendment

1. This is in response to amendment filed on 2-9-04 (Paper # 9).
2. Claims 1-8 remain for examination.

Election/Restriction

3. Claims 9-18 were withdrawn from further consideration by the examiner, 37 C.F.R. § 1.142(b) as being drawn to a non-elected species.
Applicants are urged to cancel the non-elected claims 9-18.

Applicant is reminded that **upon the cancellation of claims to a non-elected invention, the inventorship must be amended** in compliance with 37 C.F.R. § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(h).

4. Applicant's arguments regarding rejection of claims 1-8 under 35 U.S.C. § 112 second paragraph have been fully considered and rejection of claims 1-8 under 35 U.S.C. 112 second paragraph has been **withdrawn**.

Claim Rejections - 35 U.S.C. § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 7-8 are rejected under 35 U.S.C. § 102(b) as being anticipated by Tokumitsu et al., US. patent 4,833,665 (hereafter Tokumitsu).

As to claim 1, Tokumitsu discloses the invention as claimed [see Figs. 1-6, especially 3 and 5-6] including a mark reading section and a recording state changing section, comprising:

a mark reading section [fig. 1, unit 3] for reading a mark written on an information storage medium, said information storage medium which has a recording area divided into a plurality of regions, on which information is recorded by writing a mark, and from which information is reproduced by reading the recorded mark [abstract; col. 1, line 67 to col. 2, line 6 and col. 3, line 49 to col. 4, line 20]; and

a recording state changing section [fig. 1, units 1, 2 and 3] for changing a recording state in an adjacent region situated next to a failed region from which said mark reading section fails to read a mark among a plurality of said regions so that cross talk caused due to said adjacent region can be reduced if said mark reading section fails to read said mark, said mark reading section again reading a mark in said failed region after changing a recording state in said adjacent region by said recording state changing section [abstract; col. 1, line 67 to col. 2, line 6 and col. 3, line 49 to col. 4, line 20].

6. As to claim 2, Tokumitsu discloses:

said recording state changing section erases a mark written in said adjacent region [abstract; col. 1, line 67 to col. 2, line 6 and col. 3, line 49 to col. 4, line 20].

7. As to claim 3, Tokumitsu discloses:

said recording state changing section writes on an overwriting basis in said adjacent region a mark generating cross talk lower than cross talk caused due to a mark written in said adjacent region [abstract; col. 1, line 67 to col. 2, line 6 and col. 3, line 49 to col. 4, line 20].

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8. As to claim 7, Tokumitsu discloses:

said recording state changing section changes a recording state in an adjacent region after evacuating information recorded in said adjacent region and restores said evacuated information in said adjacent region after again reading a mark in said failed region by said mark reading section [abstract; col. 1, line 67 to col. 2, line 6 and col. 3, line 49 to col. 4, line 20].

9. As to claim 8, Tokumitsu discloses:

information storage medium includes an alternative region used in place of said region according to needs, said recording state changing section performing evacuation of information recorded in said adjacent region to said alternative region and registration of use of said alternative region instead of said adjacent region before changing a recording state in said adjacent region [abstract; col. 1, line 67 to col. 2, line 6 and col. 3, line 49 to col. 4, line 20].

Claim Rejections - 35 U.S.C. § 103

10. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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11. Claims 4-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tokumitsu as applied to claims 1-3 and 7-8 in view of Matsumoto et al., US. patent 6,407,979 (hereafter Matsumoto).

As to claim 4 Tokumitsu discloses all of the above elements, including an optical disk system, and said recording state changing section writes on an overwriting basis. Tokumitsu does not specifically disclose details of the lengths of the marks in adjacent regions that can be written.

However, it is well known in the art that most systems adjust the marks depending upon the thickness of the substrate and amount of power being used to write the marks and weaker power produces smaller marks. Also Matsumoto clearly discloses:

said adjacent region a mark having a length shorter than that of a mark written in said adjacent region [col. 9, lines 57-67 and col. 10, lines 24-38]. Both Tokumitsu and Matsumoto are interested in improving the storage mechanism in an optical disk device, and are trying to do high density recording by similar means. Both are managing the different tracks and/or sectors to store more information.

One of ordinary skill in the art at the time of invention would have realized that it is necessary to maintain a desirable read signal level. However, the land or groove reflection coefficients are generally vary based on the groove depth, thus causing data read out errors. And in order to avoid these kind of errors one must change the size and/or depth of the marks. Therefore, it would have been obvious to have used a shorter mark in the adjacent region in the system of Tokumitsu as taught by Matsumoto because one would be motivated to reduce noise or cross talk in the system of Tokumitsu and provide better signal to noise ratio by controlling the length and/or widths of the marks, thus improving tracking and access and avoid erroneous erasure [col. 4, lines 33-43; Matsumoto].

12. As to claim 5, Matsumoto discloses:

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said recording state changing section writes on an overwriting basis in said adjacent region a mark having a width narrower than that of a mark written in said adjacent region [col. 9, lines 57-67 and col. 10, lines 24-38]

13. As to claim 6, Matsumoto discloses:

said recording state changing section writes on an overwriting basis in said adjacent region a mark with power weaker than power used when a mark is written in said adjacent region [col. 9, line 41-67].

Tokumitsu and Matsumoto were cited as prior art references in paper no. 7, mailed 11-10-03.

14. Applicant's arguments filed on 2-9-04 (Paper # 9) have been fully considered but they are not deemed to be persuasive for the following reasons.

15. In the REMARKS, the Applicant argues as follows:

A) That: "the cited reference does not disclose (or suggest) at least the features for changing the recording state in an adjacent region situated next to a region from which the reading of recording mark has failed." [page 11, para. 3; REMARKS].

FIRST : It seems there is problem of semantics here. Tokumitsu clearly discloses adjacent region [alternative area; see abstract]. Tokumitsu also discloses changing recording state by designating area as bad [that is changing the "recording state"] it is being now rewritten. Only the bad blocks are rewritten NOT the good ones so only that area is changed.

SECOND: As to the concept of reducing cross-talk, the Applicants are merely stating the desired result of the act of rewriting, which is inherently present when you rewrite the bad region.

B) That: "The Tokumitsu et al. reference is directed to a method for controlling information recording [original emphasis] in an information recording apparatus which includes a rewritable information record medium.

In contrast, the present invention is directed to a data reproducing operation.”
[page 11-12, para. 4 and 1; REMARKS].

FIRST: Data cannot be reproduced unless it is written first.

SECOND: Tokumitsu clearly discloses that his system is doing BOTH the writing and reading [reproduction] [see abstract, line 7, “writing and reading of data”].

C) That: “In other words, Tokumitsu does not disclose or suggest reading a mark from a region, and changing the recording state in the adjacent region situated next to this region when reading fails.” [page 12, para. 1; REMARKS].

Figure 6, shows that a data update command is received. When mark reading fails or data is found corrupted, a data update command is required because there is something wrong with the data. Tokumitsu shows this step [step 101]. Either the data is written in the same area [if area is good] or data is written in the alternate area [which is first area next to the bad area [adjacent area]].

D) That: “Moreover, even if the cited references were combined, it would not have been obvious to derive present invention.Reduction of cross talk is not even contemplated in either of the cited references.” [page 12, para. 3; REMARKS].

Cursory examination of Matsumoto shows that his invention is directed towards reducing cross-talk [see col. 4, lines 51-54]. And this also done during input and output operations. From paragraph 26-41, every paragraph talks about reduction of cross-talk.

16. THIS ACTION IS MADE FINAL. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Contact information

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is (703) 308-7940. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is (703) 872-9314.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To can be reached on (703) 305-4827.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4700 or the group Customer Service section whose telephone number is (703) 306-0377.

A handwritten signature in black ink, appearing to read 'Gautam R. Patel', with a long horizontal flourish extending to the right.

Gautam R. Patel
Primary Examiner
Group Art Unit 2655

March 25, 2004